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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,136	12/01/2006	David Teh-Wei Chou	MER 05-3176	4881

7590 10/15/2008  
Dr. Judy Jarecki-Black  
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Duluth, GA 30096

EXAMINER
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KLINKEL, KORTNEY L

ART UNIT	PAPER NUMBER
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1611

MAIL DATE	DELIVERY MODE
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10/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/570,136	<b>Applicant(s)</b> CHOU ET AL.	
	<b>Examiner</b> Kortney L. Klinkel	<b>Art Unit</b> 1611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-6, 11 and 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9, 10, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/1/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claims***

Claims 1-6 and 9-17 are pending in the instant Office action.

### ***Election/Restriction***

Applicant's election with traverse of Group VI, claims 9-10 and 12-13 in part in the reply filed on September 3, 2008 is acknowledged. The traversal is on the ground(s) that in order for restriction to be proper, the inventions must be independent or distinct and searching the additional inventions must constitute an undue burden. This is not persuasive. The Applicant is reminded that the instant application is a national stage entry of a 371 PCT application and as such, lack of unity practice is followed rather than burden of search.

The restriction requirement is still deemed proper and is therefore made FINAL.

Claims 1-6, 11 and 14-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected subject matter, there being no allowable generic or linking claim.

### ***Information Disclosure Statement***

Acknowledgement is made of applicant's submitting an information disclosure statement on March 1, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

### ***Foreign Priority***

Acknowledgement is made of applicant's foreign priority claim to EPO document 03019619.0 filed September, 4 2003. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

Claims 9-10 and 12-13 are objected to for being dependent on the composition of withdrawn claims. In order to expedite prosecution, the methods of claims 9-10 and 12-13 will be examined as if they pertain to a composition comprising a compound of formula (I) wherein W = C-halogen. Appropriate corrective action is requested.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

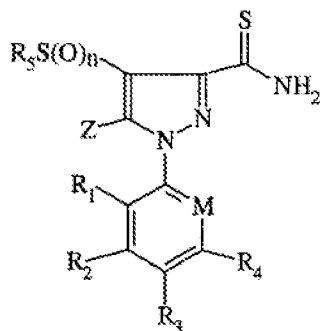
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manning et al. (WO 98/28279, as per Applicants' IDS) and in further view of Ribeill et al. (WO 00/35884, as per Applicants' IDS).

Manning teaches 1-arylpyrazoles of the following general formula and their use as pesticides (page 2, also claims 1-2, 4, 9-10, 13, and 16).



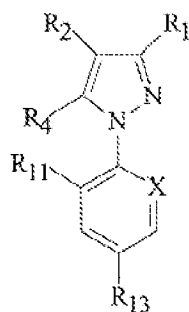
Manning's  $R_1$ , which corresponds to the instant  $R^2$  can be H or halogen. Manning's  $R_2$  and  $R_4$  can be hydrogen, *inter alia* as in the instant compounds. Manning's  $R_3$ , which corresponds to the instant  $R^3$  can be  $-CF_3$ , and  $-OCF_3$  *inter alia*. Manning's  $M$ , which corresponds to the instant  $W$ , can be  $-C-Cl$  as in the instant compounds. Manning teaches  $CSNH_2$  in the instant  $R^1$  position for all of the compounds. Manning's  $Z$ , which corresponds to the instant  $N-(R^4)-A-S(O)_mR^5$  can preferably be  $R_6NH-$  or  $R_7R_8N-$  wherein each of  $R_6$ ,  $R_7$  and  $R_8$  are identical or different, is alkyl- $S(O)_p-$  or alkenyl optionally substituted by one or more  $R_9$  wherein  $R_9$  is  $R_{10}S(O)_q-$  *inter alia*, and  $R_{10}$  is lower alkyl or lower haloalkyl. Specifically Manning teaches compounds 41 and 41 in Table 1 wherein  $Z = NHCH_2CH_2SCH_3$  and  $NHCH_2HC_2SOC_2H_5$ , respectively. Manning's  $R_5$ , which corresponds to the instant  $R^6CFX-$ , can be haloalkyl, *inter alia*. As just described, the general structure taught by Manning encompasses the general class of compounds encompassed in the instant claims.

Manning further teaches a method for the control of pests in or on an animal which comprises administering to said animal a pesticidally effective amount of a compound of formula (I) or salt thereof (claim 21).

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Manning fails to teach a specific example wherein  $R_5$  is haloalkyl. However, this deficiency is overcome by the teachings of Ribeill et al.

Ribeill teaches 1-arylpyrazoles of the following general formula and their use as pesticides (pages 2-3, also claim 1)



Ribeill's  $R_1$ , which corresponds to the instant  $R^1$ , can be  $C(S)NH_2$ , as necessitated by the claims. Ribeill's  $R_{11}$ , which corresponds to the instant  $R^2$  can be hydrogen or halogen, *inter alia*. Ribeill's  $R_{13}$ , which corresponds to the instant  $R^3$ , can be halogen, haloalkyl, haloalkoxy,  $-S(O)_qCF_3$  and  $-SF_5$ . Ribeill's  $X$ , which corresponds to the instant  $W$  can be C-halogen. Ribeill's  $R_4$ , which corresponds to the instant  $N-(R^4)-A-S(O)_mR^5$ , can be  $-N=C(R_5)-Z-R_6$  wherein  $Z$  can be  $S$ , as necessitated by the instant claims. Although Ribeill fails to teach any specific examples where  $Z = S$ . Ribeill's  $R_2$ , which corresponds to the instant  $R^6CFX-S(O)_n$  can be  $S(O)_nR_3$  wherein  $R_3$  is haloalkyl. All of the compounds in Tables 1-3 contain compounds wherein  $R_2$  meets the limitations of the instant claims. As just described, the general structure taught by Ribeill encompasses the general class of compounds encompassed in the instant claims.

Ribeill further teaches a method for the control of pests in or on an animal which comprises administering to said animal a pesticidally effective amount of a compound of formula (I) or salt thereof (claim 1).

It would have been obvious to one of ordinary skill in the art, at the time of the instant invention to arrive at the instant method for controlling pests with the instant 1-arylpyrazoles based on the teachings of Manning and Ribeill with a reasonable expectation for success. As discussed, both Manning and Ribeill teach a finite number of 1-arylpyrazoles which encompass the instantly claimed class of compounds and which are useful as pesticides and as pesticides to control pests in or on animals which is the same utility as claimed. It is generally accepted that structurally similar compounds will show similar behavior. Accordingly, the skilled artisan would have been motivated to synthesize and test compounds having the required  $R^6CFX-S(O)_n$  and  $N-(R^4)-A-S(O)_mR^5$  functionality as compounds with identical cores having these functionalities have shown excellent efficacy as pesticides in the prior art.

Applicant's data in the specification has been considered. Of the 9 compounds tested (compounds 1-1 through 1-9) for the control of cat fleas, all gave at least 80% control at a concentration of 5 ppm or less. Compounds 1-1 through 1-9 all have  $R^1 = CSNH_2$ ,  $W = C-Cl$ ,  $R^2 = Cl$ ,  $R^3 = CF_3$  and  $R^4 = Me$ ,  $A = CH_2CH_2$ . The compounds have different  $R^5S(O)_m$  and  $R^6CFX-S(O)_n$ . This evidence suggests that the core of the molecule is all that is necessary for functionality, since the system can tolerate changes in the  $R^5S(O)_m$  and  $R^6CFX-S(O)_n$  positions. Furthermore, applicants' data shows no unexpected results. Of the roughly 100 structurally similar compounds tested by Ribeill,



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they showed *in vivo* control of fleas in cats and dogs with superior results to fipronil, a known 1-arylpyrazole shown in the art to control fleas (page 42).

### ***Conclusion***

Claims 9-10 and 12-13 are rejected. No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kortney Klinkel, Ph.D. whose telephone number is (571)270-5239. The examiner can normally be reached on Monday-Friday 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sharmila Landau can be reached at (571)272-0614. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KLK

/Sharmila Gollamudi Landau/

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Supervisory Patent Examiner, Art Unit 1611